

Mitsubishi
Agricultural Machinery Corporation

Owners Manual

Mitsubishi 1540 FD

Any improper handling of this tractor could lead to an accident. Prior to the operation of the tractor, be sure to read the Instruction Manual carefully and have a thorough understanding of the description. In particular, the instructions given in “Safety Precautions” must be strictly followed.

SAFETY PRECAUTION

- When running the tractor at high speed or on roads, make sure the right and left brake pedals are interlocked so that they will not be operated independently
 - Make sure that a guard is in place when operating the belt pulley or PTO driven shaft.
 - Always wear relatively tight and belted clothing when operating the tractor. Loose jackets, shirts, sleeves or other loose clothing should not be worn because of the danger of catching them in moving parts, engine or implement.
 - When leaving the tractor, be sure to stop the engine, applying the parking brake and pulling out the starting key.
 - Never make sharp turns at high speeds.
 - When descending a slope in reverse, be sure not to abruptly operate the clutch or the brake.
 - Never operate the differential lock when running on a public road.
 - When making a sharp turn, confirm that the differential lock is disengaged.
 - Never operate the tractor on a slope that seems to be dangerous. Do not operate the clutch, brake, throttle lever and steering wheel abruptly on a slope as it is dangerous. Be careful particularly when running on a slippery road.
 - DO not carry any passengers on the tractor, nor on the linkage drawbars and implements.
 - When towing, set the hitch point below the center line of the rear axle.
 - When refueling, be sure to stop the engine. Also take special care so that the fuel will not catch fire.
 - Use a safe fuel container. Fill the tank outdoors and wipe up spilled fuel. Replace the fuel cap securely.
 - Never touch engine parts after operating the tractor or the engine until parts have had sufficient time to cool.
 - Always keep positive battery post covered with the rubber boot on the end of the cable.
 - Never operate the tractor engine in a closed building where carbon monoxide fumes can collect.
 - Do not allow Children to operate the tractor, nor adults to operate it without proper instruction
 - When mounting an implement on the tractor, be sure to follow the instructions given in “Safety Precautions” in the implement Operation Manual.
 - When running the 4-WD tractor on roads, be sure to place the front drive shift lever in OFF.
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Introduction

This instruction manual contains information on the operation, lubrication and maintenance of your tractor. The information contained is comprehensive and essential, and is designed to assist you, even if un-experienced, in utilizing your tractor.

How well your tractor continues to give satisfactory performance depends greatly upon the manner in which it is operated. It is, therefore, requested that this manual be read carefully and kept ready for use so that the operation and maintenance services will be properly be carried out in order to keep the tractor in top mechanical condition at all times.

Should any information as to your tractor be required, consult local dealer or distributor station the machine and engine serial numbers of the tractor concerned.

We are sure you will be happy with this tractor.

Tractor serial number

Engine serial number

CONTENTS

Section 1. Operation

Starting and stopping the engine

Before starting the engine, be sure to check the following points.

1. Confirm that the fuel tank is filled with sufficient fuel.
2. Check the amount of oil in the engine and transmission.
3. Check the coolant water level.
4. Always perform the daily maintenance described in SECTION 2

STARTING

On this tractor, the safety starter switch is provided for preventing unforeseen accidents from breaking out starting the engine. Installed between the starter switch and the starter motor, the safety starter switch works as a kind of circuit breaker by which, in case the clutch is not disengaged completely, the electric circuit in the engine starting system is not closed even when the key is turned to the START position.

1. Set the throttle lever at the center between idling and high speed
 2. After applying the parking brake, place the main shift lever and PTO shift lever in neutral. Then fully depress the clutch pedal
 3. Insert the starter key into the key switch and turn it counter-clockwise and hold it at the "Heat" position to heat the glow plugs. As soon as the glow plug signal on the instrument panel glows red, about 30 seconds later, rapidly turn the key to the "Start" position and the starter motor will rotate and the engine will start
 4. When the engine is started, take your hand off the key and the key then automatically returns to the "ON" position. The key must be in the "On" position while the engine is running.
 5. After starting the engine, make sure the battery charge warning lamp, water temperature warning lamp and engine oil pressure warning lamp are off. If any one of the lamps will not turn off, or lights up, stop the engine immediately, check the cause and then take the necessary countermeasures.
 6. If the engine does not start on the first attempt, do not rotate the starter motor continuously more than 10 second. Then heat the glow plug well and restart the engine.
 7. Warm up the engine especially in cold weather, before working.
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STARTING IN COLD WEATHER

1. The fuel injection pump of this engine adopts the mechanism to ensure easier engine starting by excessive injection of fuel when the throttle lever is fully pulled.
 2. To start the engine specially in cold weather fully pull the throttle lever, heat the glow plug enough and crank the engine.
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Notes:

1. After the engine has started confirm yhat the engine is running smoothly listening carefully to ascertain if nothing abnormal sounds, and inspect for oil and water leakage.
2. In case fuel runs out, be sure to bleed the fuel system after refilling the fuel tank; otherwise the engine may not be started (or even stopped soon after started). (See SECTION 3. Bleeding the Fuel system)

Important:

1. Never use ether to start the engine or this tractor.
2. Unless the engine stops, don't run the starter motor.

STOPPING

After idling the engine for a while by setting the speed control lever at the appropriate position, bring the throttle lever fully to the "STOP" position, and fuel is then cut off and the engine will stop.

Be sure to turn the starter key "OFF" when the engine has been stopped. When the operator leaves the tractor, be sure to apply the parking brake and take out the key.

INSTRUMENTS AND CONTROLS

TRACTOR METER

The tractor meter, which reads the engine speed and hours of operation, is mounted on the instrument panel.

The engine speed meter is in the upper portion which indicates the engine speed in rpm. The hour meter located in the lower center shows the accumulated running hours at rated engine speed.

OIL PRESSURE WARNING LAMP

When the starter key is switched "ON", this lamp glows yellow. When oil is circulating normally while the engine is running, the lamp turns off. If the lamp still glows yellow after the engine has been started, stop the engine immediately and check the engine lubrication oil level. If that is OK, check the oil pressure switch and cabling. If thereare any defective switches or cables, replace them.

BATTERY CHARGE WARNING LAMP

When the starter switch is set to "ON" position, the battery charge warning lamp glows red. When the battery is being charged normally while the engine is running, the lamp turns off. If the lamp continues to glow, stop the engine and check the alternator, regulator, and cabling. If there is anything defective, replace it.

WATER TEMPERATURE WARNING LAMP

Under normal operating conditions, the warning lamp will not turn on with the starter key in the "ON" position. When the coolant temperature rises abnormally, the warning light lights up, indicating overheating. Check the coolant level and fan belt, and recondition, as required.

CAUTION:

Utmost care should be taken when removing the radiator cap while the engine is overheated.

LIGHT SWITCH

The headlight switch is located on the left side of the instrument panel.

(Photo)

Headlights off

Headlights are on

Headlights are dimmed

NOTE:

The switch for the working lamp is incorporated in the light itself.

SAFETY STARTER SWITCH

As mentioned previously in this book, the safety starter switch is provided for preventing unforeseen accidents while starting the engine. Assembled in the engine starting system between the starter switch and the starter motor, the safety starter switch works as a circuit breaker in relation to the clutch pedal operation; unless the clutch pedal is fully depressed to completely interrupt the power to the engine to the transmission, the safety starter switch remains open, keeping the starter motor circuit to open even when the starter key is turned to the "START" position.

GLOW PLUG

The engine is fitted with sheathed type glow plugs which preheat the combustion chamber so that the engine may be started easily even in cold weather.

GLOW SIGNAL

The glow signal which indicates the heating state of the glow plug in the combustion chamber is installed on the instrument panel. It is easily seen from the heating condition of the glow signal resistance wire..

THROTTLE LEVER

When the throttle lever is pulled fully toward the operator, the engine speed reaches the maximum of 2,900 rpm.

The rated speed of the engine model K3B is 2,700 rpm. The engine speed is not the only the most appropriate one to get the longest service life from your tractor but also the most economical one. It is best therefore, to run the engine at the rate of 2,700 rpm.

FOOT THROTTLE

The foot throttle is installed on the right side of the step. When the hand throttle lever is in the idling position, the engine speed can be controlled freely within the range by depressing the foot pedal.

NOTE: When the hand throttle is in a high revolution mode, the foot throttle also moves into the position for those revs. When this is done the revolutions cannot be controlled by the foot throttle within the range below the revolutions set by the hand throttle lever.

CLUTCH

Depress the clutch pedal fully to bring the machine to a complete halt when shifting the gear in the transmission for changing the machine propelling speed. For shifting the PTO gears and shifting the 4-WD gear follow the similar manner.

Lowering the speed, when the tractor is overloaded, by half engaging the clutch or changing the gear at high speed will damage the clutch lining. De-clutching must be performed completely, in one clean quick movement with the engine revolutions lowered as much as possible.

NOTE: When the tractor is not used, the clutch should be disengaged by depressing the clutch pedal and the clutch lever should be hooked so that the clutch linings will not get stuck.

BRAKES

The brake is of internal expansion (drum and shoe) type and is dirt and water proof.

There are two pedals provided on the right side of the transmission case which are interlocked by a locking plate the brake is applied by depressing these pedals. To stop the tractor, lower the engine

revolutions, depress the clutch pedal and then the brake pedal. To shorten the braking distance, lower the engine revolutions quickly, depress the brake pedal and then the clutch pedal just before the engine stops.

For turning in a confined space the right and left axles can be braked independently by turning to the left the locking plate interlocking the left and right brake pedals. When traveling at a high speed or on roads make sure that the right and left brake pedals are interlocked by means of the locking plate.

When starting to travel on roads after one of the brakes has been operated more often than the other, check the balance of the right and left brakes beforehand. It is also necessary to check brake balance once a week. If you fail to check the brake balance or to interlock the right and left brake pedals, there is the most likelihood that an accident will occur.

PARKING BRAKE

When parking, apply the parking brake by locking the main brake pedals in the following manner: Interlock the right and left brake pedals by the locking plate. Keeping the pedals depressed, lock the pedals by the parking brake lever, For releasing the lock of the parking brake, depress the brake pedal further stronger, and push toe parking brake lever forwards.

8-SPEED TRANSMISSION

The gear shift patterns are shown in the diagram below. By combination of the main and sub shift levers, six forward speeds and two reverse speeds can be obtained.

The first second, and third forward speeds and the first forward reverse speed can be obtained with the sub shift lever in the LOW position, and the fourth, fifth, and sixth forward speed and second reverse speed can be obtained with the sub shift lever in the HIGH position.

NOTE: When you change the gearshift, lower the engine speed and depress the clutch pedal to disengage the transmission clutch. After stopping the tractor, shift the gears

DIFFERENTIAL LOCK

This device links the right and left wheels in the transmission and rotates them at the same speed to prevent either wheel from slipping and to increase traction force.

ENGAGING THE DIFFERENTIAL LOCK

Before the tractor slips and the speed is lowered, depress the pedal with your right foot and engage the differential lock. If the differential lock does not engage at the first attempt, repeat the operation more forcibly. If it still does not engage, lower the engine speed after disengaging the running clutch, repeat the whole operation as described above.

RELEASING THE DIFFERENTIAL LOCK

The differential lock is automatically released by the force of the spring when you put your right foot off the pedal. However, under particular conditions, there may be occasions where the lock does not release. When this occurs, depress the right and left brake pedals alternately and quickly until the lock is released. If this happens during plowing, depress the pedal on the unplowed side and the lock will be released. When the right and left brakes are interlocked, the lock is released by turning the steering wheel sharply to the left and right. When the differential lock is not released by any of these means, reverse the tractor a short distance.

CAUTION: Do not use the differential lock when running at high speed or on the road.

POWER TAKE OFF

By operating the PTO shift lever located on the upper left of the transmission case, the three PTO speeds - 565 rpm, 832 rpm, or 1,364 rpm – can be selected. When shifting the PTO shift lever, depress the clutch pedal fully to interrupt the power from the engine and make sure the machine is brought to a complete halt.

First.....565 rpm

Second..... 832 rpm

Third.....1,364 rpm

Standard PTO speeds

540 rpm @2580 engine RPM (First)

1,000 rpm @ 1979 engine rpm (Third)

1. When using a rotary tiller in the field with many stones or stumps or hard soil, where a lot of shock will be transmitted, be sure not to operate it at the third PTO speed.
2. When using implements driven by PTO shaft be sure to refer to the implements manual and operate them exactly as instructed.

NOTES:

1. When any implement is towed by the tractor, care should be taken so that the universal joint does not form an angle more than 15°.
2. When tractor is working with an impact load, correctly adjust the slip clutch on the implement side or use the shear pin of proper material so that the PTO is not overloaded.
3. To reduce the thrust load on the PTO driven shaft as much as possible, it is advisable to test operation with an implement without any load.

4. Lubricate the PTO shaft well.
5. Avoiding using a square-shaped drive shaft as much as possible.
6. Special care should be given to the yoke position so that the driven shaft is well balanced.

POWER TAKE OFF

The 4-Wheel Drive shift lever is located on the right side of the clutch housing and it should be operated in a similar manner to that for the shift, sub shift, and PTO Shift levers.

OPERATOR'S SEAT

It is adjustable in 3 stages of 28mm (1.10") to suit it to the operator's stature.

TOOL BOX

The tool box is located under the operator's seat. To use the tool box, turn the seat downward to the front.

TREAD ADJUSTMENT

REAR TREAD

The rear tread can be adjusted by changing the left and right wheels to each other. This adjustment is applicable to either specification – of 2-WD or 4-WD and ES or AG tires.

| | | |
|-----------------------------------|----------------|--------------------------------|
| AG tire | standard tread | 740mm (29.1 in) |
| AG tire | maximum tread | 890mm (35.0 in)(46") |
| ES tire | standard tread | 790mm (31.1 in) |
| ES tire | maximum tread | 840mm (33.1 in) |
| Rear wheel disk tightening torque | | 8.5 ~9.5 kg-m (61 ~ 69 ft-lbs) |

FRONT TREAD

| | | |
|------------------------------------|------|----------------------------|
| Front tread is not adjustable. | | |
| AG tire | 2-WD | 720mm (28.3 in) |
| AG tire | 4-WD | 785mm (30.9 in) (46") |
| ES tire | 2-WD | 790mm (31.1 in) |
| ES tire | 4-WD | 800mm (31.5 in) |
| Front wheel disk tightening torque | | |
| | 2-WD | 8.5~9.5 kg-m (61~69 ft-lb) |
| | 4-WD | 5.0~6.0 kg-m (36~43 ft-lb) |

CAUTION:

1. Avoid widening front tread of the 4-wheel drive tractor by switching the right and left front tires as this may cause serious troubles on the steering linkage.
2. Check at frequent intervals to make sure the front wheel is tightened securely to specified torque and that the axle housing and gear case are secured to each other to the specified torque.

AG TIRE INSTALLATION

Make sure that the AG tires are mounted so that the lugs on the tire form the staggered V's in series as viewed from the front of the tractor.

BALLAST WEIGHT

The slipping not only damages the tire but also results in working efficiency and greater fuel consumption. Slipping, therefore, must be minimized as much as possible. For that purpose, ballast weights are available as optional equipment. It is recommended that the tractor be provided with ballast weights when working in the place where slipping is likely to occur. The ballast weights can be attached in front (2-WD AG only) and rear wheel discs and the front of the chassis. Ballast can also be applied by adding water into the tires instead of using the ballast weights. For this operation, pay particular attention to the temperature and air pressure. In cold weather and where the temperature drops below 0°C (32°F), use water with anti-freeze and never fill the tire with water only. It is of course possible for you to employ a combination of water in the tire and ballast weights. Consult your dealer concerning the water injector and method of injection.

| | |
|-----------------------|--|
| Front wheel weight: | |
| 2-WD AG Tire outside | 16 kg (35.2 Lb) x 2 = 32 kg (70.5 Lb) |
| Rear wheel weight: | |
| 2-WD and 4-WD AG & ES | 23 kg (50.7 Lb) x 2 = 46 kg (101.3 Lb) |
| Chassis weight: | |
| 2-WD and 4-WD | 25 kg (55.1 Lb) x 1 = 25 kg (55.1 Lb) |

TIRE PRESSURE

Tire pressure should be checked frequently. Either too high or too low pressure results in deterioration of the tire. To properly maintain the tires, make sure that the tire pressure is checked at least once a week.

| Type | Location | Tire Size | Ply | Pressure | Valve Type |
|------|------------|-----------|-----|----------------------------------|------------|
| AG | Front 2-WD | 4.50 - 10 | 2 | 1.6kg/cm ⁴ (22.8psi) | TR-13 |
| AG | Front 4-WD | 5-12 | 3 | 1.2 kg/cm ⁴ (17.1psi) | TR-13 |

| | | | | | |
|----|---------------|-----------|---|----------------------------------|--------|
| AG | Rear 2 & 4-WD | 8-16 | 4 | 1.6kg/cm ⁴ (22.8psi) | TR-15 |
| ES | Front 2-WD | 18x7.00-8 | 2 | 1.0kg/cm ⁴ (14.22psi) | TR-413 |
| ES | Front 4-WD | 6-12 | 2 | 1.0kg/cm ⁴ (14.22psi) | TR-13 |
| ES | Rear 2 & 4-WD | 9.5-16 | 4 | 1.4kg/cm ⁴ (19.9psi) | TR-15 |

NOTE: Air pressure of the tires must be checked according to the loading weight on the tires. For more details, please call and talk with the local dealer.

THREE POINT LINKAGE

The Tractor is provided with a category 1 3-point link. The implement which is to be mounted must match the 3-point link size.

NOTE: When an implement is towed with the linkage drawbar installed on lower links, the lower links should be always be kept horizontal.

HYDRAULIC SYSTEM

Employed for this tractor is “live” hydraulic system that makes the hydraulic energy available whenever needed while the engine is running, the hydraulic pump being directly mounted on the timing gear case of the engine.

The oil filled in the factory is SAE #80 gear oil, the same as that for the transmission system and is filtered through a 100 mesh oil filter. Lift hold down control can be made by operating the hydraulic control lever, which is on the right side of the operator’s seat. Down speed control and locking of the implement to be mounted on the tractor can be done in use of the flow control knob. The implement to be mounted on the tractor, such as front end loaders, can be operated by the hydraulics taken out externally through the tap hole of PT3/8 provided.

Mechanism and operation of the hydraulic system

To operate the tractor properly, a good knowledge of the operation of the hydraulic mechanism is required

LIFT

When the hydraulic control lever on the right side of the seat is moved full backward, the hydraulic oil is forced to flow through the hydraulic control valve to the cylinder. When the implement is moved up to a specific position, the control valve is automatically placed in neutral by the feedback rod and thus the implement is held in the lift position.

DOWN

When the hydraulic control lever is moved fully to the front, the hydraulic oil flows from the cylinder back to the tank through the control valve.

HOLD

When the implement is fully moved up, the control valve is placed in neutral position while the implement is moving up or down. The implement can be held in any desired position.

FLOW CONTROL VALVE

The flow control knob which controls the lowering speed of the implement is located in front of the hydraulic case under the seat. When the knob is turned clockwise, the lowering slows down, and when further turned, the control valve is closed. As a result, the implement will be held in its position and not move downward any more. Turning the knob counter-clockwise makes the lowering speed faster.

INSTALLING THE EXTERNAL HYDRAULIC ADAPTER (OPTIONAL)

When the hydraulic adapter is used:

Loosen the three bolts on the left side of the hydraulic case, and remove the cap taking care to not drop the O-ring.

Fit the O-ring correctly to the hydraulic adaptor and install it on the hydraulic case. Tightening torque 2.5 ~3.0 kg-m (18~22 ft-Lb).

Connect the outlet of the external hydraulic adaptor, inlet of the control valve attached to the implement mounted on the tractor, outlet of the control valve, and oil return port of the external hydraulic adaptor by pipes.

Start the engine and by operating the control valve of the implement mounted on the tractor bleed the cylinder and pipes. Then check the pipe joints for oil leakage.

NOTE: To use the external hydraulic adaptor the implement mounted on the tractor must have a double action control valve.

EXTERNAL HYDRAULIC Service

When the tractors hydraulic valve is used:

The control valve equipped on the tractor is of single action type, and therefore the implement mounted on the tractor must be also of a single action type.

Connect the hydraulic external service plug and cylinder plug of the implement with a rubber hose. Relieve the auto-return of the hydraulic control lever moving the locknuts backwards on the auto – return rod. Start the engine and place the control lever in the lift position. By operating the safety valve bleed the air completely from the cylinder and pipes, and lock the flow control knob. When the hydraulic control lever is placed in “Lift”, the implement moves upward, when placed in the “Down” the implement moved downward.

NOTE: the hydraulic control lever will not return to “Neutral” automatically, so the control lever must be returned manually to Neutral when the implement reaches a maximum height. If the control lever is left in the “Lift” the relief valve starts operation and the temperature of the hydraulic oil rises thus causing trouble to the machine. Be sure to move the control lever back to Neutral.

DRAWBAR

The permanent drawbar is provided as standard. To pull an attachment or trailer, be sure to use a drawbar.

PTO GUARD

In any type of operation, be sure to install the PTO guard for additional safety.

FRONT PTO (OPTIONAL)

The front PTO can be used in either specification of 2-WD or 4-WD. When assembling the front PTO, install the flange to the rubber coupling with the care that the boss may face to the front side. For further details, please contact the nearest dealer.

NOTE:

Be sure to cut off the steel band in the rubber coupling after installation.

VERTICLE EXHAUST

The standard muffler setting part is formed square. Make installation of the standard muffler setting it vertically upright and install a tail pipe (optional), and then it will be usable as up-swept muffler.

Section 2. Regular Maintenance

To keep your tractor operating in the top condition and insure its proper performance and reliability for a long period of time, periodic inspection is indispensable. If your tractor is not periodically serviced, the results will be such that its performance and operating life will be reduced. Also a major breakdown is more likely to occur, which will entail much more expense than that which you would pay for regular maintenance. Maintenance and servicing are very important items, however, the procedure is very simple.

Section 3. Service Information

Section 4. Storing

Section 5. Specifications and Data

Engine (Mitsubishi Diesel Engine)

| | | |
|---------------------------|--|--------------------------|
| Model..... | K3B | |
| Type..... | Water Cooled vertical 4 cycle overhead valve in line diesel engine | |
| Number of cylinders..... | 3 | |
| Piston Displacement..... | 849 cc (51.7 cu. In.) | |
| Bore x Stroke..... | 68 X 78 mm (2.67 x 3.07 in.) | |
| Max. bare Horsepower..... | 18 Hp @ 2,700 rpm | |
| Max. Torque..... | 4.2 kg-m (30.4ft-lb) @ 1800 rpm? | |
| Max. Engine RPM..... | 2,900 rpm | |
| Idle Speed..... | 900 rpm | |
| Rated Engine Speed | 2,700 rpm | |
| Compression Pressure..... | 32 kg/cm ⁴ (455.1 psi) @ 280 rpm | |
| Injection Order..... | 1 – 3 - 2 | |
| Weight..... | 120 kg (265 lbs) Dry | |
| Valve Clearance | Intake..... | 0.25 mm (0.010 in.) cold |
| | Exhaust..... | 0.25 mm (0.010 in.) cold |

| Make | Liter | CID | Engine Model | Year | Rod Torque | Main Torque | Cylinder Head Bolt Torque |
|---|-------|-----|--------------|------|-----------------|-----------------|---|
| MITSUBISHI | 0.9 | 52 | K3B | | 23-25 FT/LBS | 36-40 FT/LBS | 51-58 FT/LBS 10M SCREWS, 80-87 FT/LBS 12M SCREWS |
| http://www.aera.org/downloads/Torque3.pdf | | | | | | | |

Cooling System

| | |
|-----------------------------|----------------------------------|
| Thermostat | Wax Type (if installed) |
| Radiator Cap Pressure | 0.6 kg/cm ² (8.5 psi) |
| Water Pump | Centrifugal impeller type |
| | MM407402 |
| | IHC # 1273085C91 |
| Coolant Volume..... | 5L (5.3 QT.) |

| | | |
|----------------------|--|---------------|
| Belt length and size | Size "A" 37.25" long | Granger 3L370 |
| | NAPA NBH 257370 | |
| | Belt Angle : 36 | |
| | Belt Imperial Length : 37.56" (954 mm) | |
| | Belt Top Width : .41" (10 mm) | |

Fuel System

| | |
|---------------------------|----------------------------------|
| Fuel | Wax Type (if installed) |
| Fuel Injection Pump | 0.6 kg/cm ² (8.5 psi) |
| Injection nozzle | Centrifugal impeller type |
| Fuel filter | Paper element type |
| Fuel Tank..... | 18 L (4.7 GAL.) |

Lubrication System

| | |
|--------------------|---|
| Oil Pump | Trochoid type pump |
| Oil Filter | Paper Element filter type cartridge NAPA 1334 |
| Oil Pressure | 6 kg/cm ² (85.3 psi) |
| Oil Capacity..... | 3 L (3.2 QT.) |

Air Cleaner

| | |
|--------------|--|
| Type | Cyclone dry air cleaner (NAPA 6270 modified by switching the plastic cyclone to the other end of the filter) |
| Filter | Dry paper element |

Governor

| | |
|------------|-------------------------|
| Type | Centrifugal weight type |
|------------|-------------------------|

Electrical System

| | |
|----------------------|------------------------------|
| Battery | G100-S6 Polymion 12v – 45 Ah |
| Generator | 12 V – 15 A |
| Starting Motor | 12 V – 1.6 kw Magnet type |

| | |
|--|---|
|  | <p>JS099 FOR ENGINE MODEL MITSUBISHI K3A K3B K3D K3E 12V 1.6KW CW M2T50371 M2T50381 M2T50391 MM409410</p> |
|  | <p>JS116 FOR ENGINE MODEL MITSUBISHI K3A K3B K3D K3E K3F K4C K4D K4E K4F K4M S3L S3L-2 S4L S4L-2 12V 2.0KW CW REPLACE M2T56272 MM409413</p> |
| <p>Glow Plug</p> | <p>10.5 V – 10 A Sheathed type</p> |

Chassis Dimension

| Model..... | 2-Wheel drive | 4-Wheel drive |
|--|------------------|----------------------|
| Overall length | 2320mm (91 in) | 1965mm (in) |
| Overall width | 930mm (36.9 in) | 960mm (37.8 in)(46") |
| Overall height to steering wheel | 1180mm (46.5 in) | 1180mm (46.5 in) |
| Wheel base | 1420mm (56 in) | mm (52.5 in) |
| Ground clearance | 280mm (11.2 in) | 235mm (9.3 in) |
| Tread | | |
| Front AG tire(22" dia) | 720mm (28.3 in) | 785mm (30.9 in)(37") |
| Front ES tire | 790mm (31.1 in) | 800mm (31.5 in) |
| Rear AG tire (standard) | 740mm (29.1 in) | 740mm (29.1 in) |
| Rear AG tire (maximum)(33" dia) | 890mm (35.0 in) | 890mm (35.0 in)(46") |
| Rear ES tire (standard) | 790mm (31.1 in) | 790mm (31.1 in) |
| Rear ES tire (maximum) | 840mm (33.1 in) | 840mm (33.1 in) |
| Weight | 546 kg (1205lbs) | 560 kg (1325 lbs) |
| Turing Radius (with brake) | 1700mm (.0 in) | 1800mm (71.0 in) |

| | | |
|-------------------------------|------------------|------------------|
| Turing Radius (without brake) | 2000mm (81.0 in) | 2450mm (96.0 in) |
|-------------------------------|------------------|------------------|

Clutch

| | |
|-----------------------|------------------------|
| Clutch type | Dry single disk plate |
| Torque capacity | 9.42 kg-m (68.1 ft/lb) |

Transmission

| | |
|-------------------------------------|-----------------------------|
| Number of shift levers | 2 |
| Speed steps | 6-forward, 2-Rreverse |
| Speed change method..... | Selective sliding gear type |
| Differential gear | Bevel gear type |
| Differential lock | With differential lock |
| Capacity Diff and Rear carrier..... | 12 L (21.2 QT.) |

Power Take Off

| | |
|---------------------------------|--|
| Power take off shaft | 18 spline 25 mm |
| PTO Horse power | 15.2 Hp @ 2,700 engine rpm |
| PTO Shaft speed..... | 565 rpm, 832 rpm, 1364 rpm @2,700 engine rpm |
| Standard PTO speed (L) | 540 rpm @2,580 engine rpm? |
| Standard PTO speed (M) | 1000 rpm @ 1,979 engine rpm? |
| Standard PTO speed (H) | 1000 rpm @ 1,979 engine rpm? |
| Direction of rotation | Clockwise as viewed from the rear |
| Max. Torque..... | 4.2 kg-m (30.4ft-lb) @ 1800 rpm? |

Brake

| | |
|---------------------|--|
| Brake type | Foot operated internal expansion waterproof dry type |
| Parking Brake | Main brake use hand operating lock type |

Steering

| | |
|----------------------------|------------------------------|
| Steering type (2-WD) | Worm and sector type |
| (4-WD)..... | Ball screw type |
| Toe-in (2WD & 4WD)..... | 6mm +_ 2mm (5/32in ~10/32in) |

Hydraulic System (Mitsubishi live hydraulic system)

| | |
|------------------------|--|
| Control | Lift, hold, down, flow control and lift lock |
| Type of cylinder | Single acting cylinder |

| | |
|--------------------------------|---|
| Diameter of piston | 60 mm (2.36 in) |
| Stroke of Piston | 71 mm(2.8 in.) |
| Pressure relief valve..... | 135 kg/cm ² (1,920 psi) |
| Pump model | 18 Hp @ 2,700 rpm |
| Type of hydraulic pump | Pressure loading type |
| Output of hydraulic pump | 13.8 L (3.6 gal) per min at 2,900 engine rpm (5.27 cc/rev design output) |
| Implement lock valve | With lock valve |
| Hydraulic oil | SAE #80 gear oil, same as transmission oil |
| External service | PT 3/8 Tap |
| Hydraulic adaptor plate | Optional |

3-Point Linkage

| | |
|----------------------------------|-------------------|
| “Category 1” | |
| Lifting Capacity | 650 kg(1,430 lbs) |
| Top hitch pin hole diameter..... | 19.5 mm (0.77 in) |
| Lower link stud hole | 22.5 mm (0.89 in) |
| Width of cross shaft | 683 mm (26.9 in) |

Drawbar

| | |
|---------------------------------------|--------------------|
| Type | Permanent type |
| Max. drawbar pull (2-WD) | 390 kg (860 lbs) |
| Max. drawbar pull (4-WD) | 590 kg (1,300 lbs) |
| Max. drawbar Hp (2 WD and 4-WD) | 10.2 Hp ??? |

Tire

| | | Tire size | Ply | Lug pattern | Allowable load | pressure |
|----|---------------|-------------------|-----|-------------|---------------------|----------|
| AG | Front 2-WD | 4.00-9 | 2 | Three rib | 130 kg (287 lb) | |
| AG | Front 4-WD | 5-12 (22" dia) | 2 | Farm lug | 150 kg (330 lb) | 17(117) |
| AG | Rear 2 & 4-WD | 8-18 (33" dia) | 4 | Farm lug | 475 kg (1,047 lb)?? | 17(117) |
| ES | Front 2-WD | 18x7.00-8 | 2 | Pillow Dia. | 205 kg (452 lb) | 19(131) |
| ES | Front 4-WD | 6-12 | 2 | Diamond | 180 kg (400 lb) | 19(131) |
| ES | Rear 2 & 4-WD | 9.5-16 | 4 | Diamond | 555 kg (1,224 lb) | 17(117) |
| | | | | | | |

Traveling Speed

| | | | | | |
|------|-------------|-------|-----|-----|--|
| Tire | Size 8 x 18 | KM/Hr | M/s | MPH | |
|------|-------------|-------|-----|-----|--|

| | | | | | |
|-----|----|-----------|--|----------|--|
| | L1 | [1.3kph] | | 0.82mph | |
| | L2 | [2.0kph] | | 1.24mph | |
| | L3 | [3.7kph] | | 2.30mph | |
| | H4 | [5.8kph] | | 3.61mph | |
| | H5 | [8.8kph] | | 5.47mph | |
| MAX | H6 | [16.3kph] | | 10.14mph | |
| | RL | [1.7kph] | | 1.05mph | |
| | RH | [7.4kph] | | 4.61mph | |

Capacities

| | |
|------------------------|--------------------------|
| Engine Oil | 5L (5.3 QT.) |
| Fuel Tank | 18 L (4.7 GAL.) |
| Transmission Case Oil | 12 L (21.2 QT.) |
| Steering Gear Case Oil | 0.3L (0.64 Pint) |
| Hydraulic Oil | Same as Transmission Oil |
| Front Wheel Drive Axle | 2.5 L (5.5 Pint) |
| Cooling Water | 5L (5.3 QT.) |
| | |